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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,008	11/23/2005	Peter John Miller	KILBU P-73 / 500728.	1716

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EXAMINER

CHANG, SUNRAY

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/522,008

Applicant(s)

MILLER ET AL.

Examiner

Sunray Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is in responsive to the paper filed on October 13<sup>th</sup>, 2006.

Claims 1 – 16 are presented for examination.

Claims 1 – 16 are rejected.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 8, 15 and 16 are rejected** under 35 U.S.C. 102(e) as being anticipated by Toru Futawatari (U.S. Patent No. 6,357,289 and referred to as **Futawatari** hereinafter).

**Regarding independent claims 1, 8, 15 and 16, Futawatari teaches,**

- A control system for a load [an automatic transmission control system having a fail-safe function ... gear mode, Abstract], the system comprising
- a first microprocessor having an output to provide a drive signal to drive the load [an automatic transmission control unit, Abstract; Col. 1, lines 7 – 16 and Fig. 1],

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- a second microprocessor to monitor the operation of the first microprocessor and the operation of the load [a fail-safe function, Abstract; Col. 1, lines 7 – 16 and Fig. 1],
- the system being arranged so that when the second microprocessor detects a fault in the operation of the first microprocessor and/or the operation of the load, the second microprocessor is arranged to switch out the load or halt the operation of the first microprocessor [sensor means for detecting a throttle opening, a gear mode, a command means..., Col. 2, line 16 – Col. 3, line 21]:

The examiner further explains, the automatic transmission control system disclosed by **Futawatari** reference having a fail-safe function to monitor the control commands and the output responses from and to the controlled gears, behaving exactly the same function with the function of the two different microprocessors claimed by the applicants. [see Abstract and Col. 1 – Col. 4]

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 2 – 7, and 9 – 14 are rejected** under 35 U.S.C. 103(a) as being unpatentable over **Futawatari**, and in view of Toshiro Matsuda (U.S. Patent No. 4,709,341 and referred to as **Matsuda** hereinafter).

(**Futawatari** as set forth above generally discloses the basic inventions.)

**Regarding dependent Claim 2,**

**Futawatari** teaches a control system for a load [an automatic transmission control system having a fail-safe function ... gear mode, Abstract].

**Matsuda** teaches, both microprocessors monitor the current in the load. (see col 1, lines 38-42) for the purpose of carrying out a fail-safe operation. [Abstract]

It would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of **Futawatari** to include "both microprocessors monitor the current in the load", for the purpose of carrying out a fail-safe operation. [Abstract]

**Regarding dependent Claim 3,**

**Matsuda** teaches, a first resistor is connected between a driver output of the first microprocessor and an input of the second microprocessor (see col 4, lines 7-10), to allow the second microprocessor to monitor if the first microprocessor is attempting to turn on the load (see col 7, lines 14-19), for the purpose of carrying out a fail-safe operation. [Abstract]

**Regarding dependent Claim 4,**

**Matsuda** teaches, a second resistor with a value less than that of the first resistor, is connected between the output of the first microprocessor and a low voltage to ensure a driver controlling the load is off whenever the output of the first microprocessor is in a high resistance state. (see col 4, lines 7-10 and also see col 4, lines 27-29), for the purpose of carrying out a fail-safe operation. [Abstract]

**Regarding dependent Claim 5,**

**Matsuda** teaches, at least one of the microprocessors is arranged to calculate the current of the load by measuring the voltage across it, and when the load current does not meet predetermined criteria, to switch out the load. (see col 4, lines 24-29), for the purpose of carrying out a fail-safe operation. [Abstract]

**Regarding dependent Claim 6,**

**Matsuda** teaches, the control system is a vehicular control system. (see col 1, lines 61-68), for the purpose of carrying out a fail-safe operation. [Abstract]

**Regarding dependent Claim 7,**

**Matsuda** teaches, the load is a gear box selector, a clutch selector, or a valve. (see col 3, lines 45-54), for the purpose of carrying out a fail-safe operation. [Abstract]

**Regarding dependent Claims 8 – 14,**

**Claims 8 – 14** are directed to the same subject matter as claimed throughout claims 1-7 and 15; therefore claims 8-14 are rejected under the same rationale as claims 1-7, 15 and 16 cited above.

**Response to Amendment**

**Claim Objections**

4. The examiner has withdrawn the claim objections.

**Claim Rejections - 35 USC § 112**

5. Applicants amend the claims to overcome the rejections; the examiner has withdrawn the 112 rejections.

**Claim Rejections - 35 USC § 102**

6. Applicants argue the **Matsuda** reference does not teach “monitoring external elements but self-checking”, which the examiner agrees and has withdrawn the 102(b) rejections. Yet, the examiner further cites 103 rejections based on a newly cited reference, **Futawatari** to be combined with the **Matsuda** reference which clearly discloses the controlling and monitoring function claimed by the applicants.


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**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunray Chang who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. via telephone number (571) 272-3682 or facsimile transmission (571) 273-3682 or email [sunray.chang@uspto.gov](mailto:sunray.chang@uspto.gov).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687.

The official facsimile transmission number for the organization where this application or proceeding is assigned is (571) 273-8300.

  
Anthony Knight  
Supervisory Primary Examiner  
Group Art Unit 2121  
Technology Center 2100  
U.S. Patent and Trademark Office

December 7, 2006